08-13-01

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IN THE UNITED STATES PATENT AND TRADEMARK

Box New Patent Application
Commissioner for Patents
Washington, D.C. 20231

Attorney's Docket No.: 60409.300901

FILING TRANSMITTAL

Transmitted herewith for filing is the Patent Application of : Paul Cheng, Nelson L. Chow and Fangli Chien

For: **"LARGE DATABASE SEARCH USING CAM AND HASH"**

ENCLOSURES

- ☒ 40 page application including specification, claims, abstract;
- ☒ 10 sheets (Figs. 1 – 11b) of ☐ informal/☒ formal drawings; 1 sheet of tables as drawings (Tables as Drawings 1 – 3)
- ☒ A Declaration, Power of Attorney & Petition (☒ signed/☐ unsigned);
- ☒ A postcard for return to us as proof of receipt of the referenced documents.

and

- ☒ An Assignment of the invention with an assignment cover sheet;
- ☒ Applicant claims small entity status (Under 37 CFR 1.27);
- ☐ IDS (form PTO-1449) and copies of references;
- ☐ An Associate Power of Attorney;
- ☐ A certified copy of the priority document (Under 35 USC 119);
- ☐ A Power of Attorney by Assignee;

TYPE OF FILING

- ☐ This application claims the benefit of an earlier filed Patent Application Number *****, filed ***** (35 USC 120).
- ☐ This application claims the benefit of the priority date of an earlier filed U.S. Provisional Patent Application Serial _____, filed _____ (35 USC 119).
- ☐ This is an application filed pursuant to 37 CFR 1.53, permitting receipt of a filing date upon filing of specification, claims and drawings, if required, with applicant being given a period of one month from the date of notice to file the fee and oath or declaration.
- ☒ In the event any parts of this application are missing, please treat this as a filing under 37 CFR 1.53 as defined just above.

CERTIFICATE OF MAILING (37 CFR 1.10(A))

CERTIFICATE OF MAILING BY "EXPRESS MAIL" - Rule 10: I hereby certify that this correspondence is being deposited with the U. S. Postal Service "Express Mail Post Office to Addressee" under 37 CFR 1.10 as Express Mail No. EL834483834US addressed to the Commissioner for Patents, Washington, D.C. 20231 on August 9, 2001 by Lori Cox.

Date: August 9, 2001

Lori Cox

Docket No.: 60409.300

LARGE DATABASE SEARCH USING CAM AND HASH

Inventors: CHENG, Paul; CHOW, Nelson L.; and CHIEN, Fangli

Atty. ref.: 60409.300901

THIS CORRESPONDENCE CHART IS FOR EASE OF UNDERSTANDING AND INFORMATIONAL PURPOSES ONLY, AND DOES NOT FORM A PART OF THE FORMAL PATENT APPLICATION.

10 search engine
12 controller
14 hash function
16 memory
16a base region
16b conflicts region
18 address bus
20 result bus

50 search engine
52 controller
54 CAM
56 memory
58 search data bus
60 address bus
62 result bus

100 search engine
110 hash pointer unit
112 controller
114 memory
116 hash function
118 address bus
120 pointer bus
122 result bus

200 search engine
210 H-CAM
212 controller
214 memory
214a base region
214b conflicts region
216 search data bus
218 address bus
220 result bus
222 hash unit
224 CAM unit
226 logic unit
228a-d paths

300 search engine
310 H-CAM
312 controller
314 memory
314a base region
314b-e conflicts regions
316 search data bus
318 address bus
320 result bus
322a-d hash units
324a-d CAM units
326 logic unit
328a-j paths

400 search engine
410 H-CAM
412 controller
414 memory
414a base region
414b-c conflicts regions
416 search data bus
418 address bus
420 result bus
422a-b hash units
424a-b CAM units
426 logic unit
428a-e paths
430 programming unit

500 process
510-550 steps

600 search engine
610 H-CAM
612 controller
614 memory

620	result bus
622	hash unit
624	CAM unit
640	logic unit
652	comparison section
654	search data storage
656	comparator
658	logic unit
660	hash pointer memory
662	search data memory
664	hit line
700	search engine
710	H-RAM
712	controller
714	memory
722	hash unit
740	logic unit
752	comparison section
754	search data storage
756	comparator
758	logic unit
766	comparison section
800	search engine
810	H-CAM
812	controller
814	memory
862	hash blocks
864	CAM block
866	comparison section
868	main logic unit
870	input logic sub-units
872	hash unit
874	input logic sub-unit
876	CAM units
878	output logic sub-unit
880	search data storage
882	comparator
884	output logic sub-unit
886	input path
888	hit line
900	search engine
910	H-CAMs
912	controller
914	memory
916	search data bus
918	address bus
920	result bus
922	expansion bus
924	hit line
1000	search engine
1010	H-RAMs
1012	controller
1014	memory
1016	search data bus
1018	address bus
1020	result bus
1022	expansion bus
1100	search engine
1110a	CAMs
1110b	H-CAMs
1110c	H-RAMs
1112	controller
1114	memory
1116	search data bus
1118	address bus
1120	result bus
1122	expansion bus